UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/992,914	12/18/1997	EIJIRO WATANABE	0020-4348P	4405

2292 7590 08/29/2002

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
KRUSE, DAVID H	

ART UNIT	PAPER NUMBER
1638	28

DATE MAILED: 08/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 08/992,914	Applicant(s) WATANABE ET AL.	
	Examiner David H Kruse	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 June 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6,7,9-18,30-36,40,41,43 and 44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6,7,9-18,30-36,40,41,43 and 44* is/are rejected.

7)☒ Claim(s) *43 and 44* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

STATUS OF THE APPLICATION

1. This Office Action is in response to the Reply filed 6 June 2002.

2. The translation of the Foreign Priority document has been received, filed 6 June 2002, and has been entered into the application. Applicant's claim to Foreign Priority has now been perfected.

3. Claims 1-4, 6, 7, 9-18, 30-36, 40, 41, 43 and 44 are pending in the instant Application. The Examiner appreciates Applicant's submission of a clean copy of the pending claims in the Reply.

4. The objection to claim 1 is withdrawn in view of Applicant's amendment.

5. The rejection of claims 10, 14, 30, 32 and 36 under 35 U.S.C. § 112, second paragraph, as indefinite is withdrawn, Applicant's submission of a clean copy of the pending claims has clarified the status of the instant claims.

6. The provisional rejection of claims 1-4, 6-7, 9-18, 30-36, 40-41 and 43-44 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 40-49 and 58 of copending Application No. 09/415,918 is now moot because said copending application has been abandoned (see page 8, last paragraph of the Remarks).

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

8. Claims 43 and 44 are objected to because of the following informalities: The phrase "An isolated nucleic acid of claim 1" should read -- The isolated nucleic acid of claim 1 --. Appropriate correction is required.

9. Claims 43 and 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. See above objection.

Claim Rejections - 35 USC § 112

10. Claims 1-4, 7, 10, 11, 14-16, 30-36, 40 and 41 remain rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is repeated for the reason of record as set forth in the last Office action mailed 6 February 2002. Applicant's arguments filed 6 June 2002 have been fully considered but they are not persuasive.

Applicant argues that in the present application, the inventors have described four variant cDNAs, obtained from four different plant species that encode proteins having the desired activity. Applicant argues that the inventors have further provided examples of PCR primers and detailed description of how to use them to isolate additional examples of isolated DNA encoding raffinose synthase from other species. Applicant argues that the inventors have further provided description of an assay that

can be used to determine if the protein encoded by any gene isolated by the method of the Example in fact is a functional raffinose synthase (see pages 6-7 of the Reply).

The Examiner responds that it remains unclear that Applicant has adequately describe the genus of plant raffinose synthase genes, other than by the function of the encoded polypeptides, and that Applicant was in possession of the invention as broadly claimed. Applicant does not describe any special feature of the claimed isolated nucleic acids or the encoded raffinose synthase polypeptide by which one of skill in the art would recognize other raffinose synthase encoding nucleic acids, other than the function of the encoded polypeptide. See also, MPEP § 2163 which states that the claimed invention as a whole may not be adequately described where an invention is described solely in terms of a method of its making coupled with its function and there is no described or art-recognized correlation or relationship between the structure of the invention and its function. A biomolecule sequence described only by a functional characteristic, without any known or disclosed correlation between that function and the structure of the sequence, normally is not a sufficient identifying characteristic for written description purposes, even when accompanied by a method of obtaining the claimed sequence.

See *Amgen inc. v Chagai Pharmaceutical co.*, 18 USPQ 2d 1016 (Fed. Cir. 1991), which teaches that the conception of a chemical compound requires the inventor to be able to define the compound so as to distinguish it from other materials, and to describe how to obtain it rather than simply defining it solely by its principle biological property; thus, when an inventor of a gene, which is a chemical compound albeit a

complex one, is unable to envision detailed constitution of the gene so as to distinguish it from other materials, as well as a method of obtaining it, the conception is not achieved until a reduction to practice has occurred, and until after the gene has been isolated.

Claim Rejections - 35 USC § 102

11. Claims 1-4, 7, 10, 11, 14-16, 30-36, 40 and 41 remain rejected under 35 U.S.C. § 102(e) as being anticipated by Osumi *et al* (U.S. Patent 6,166,292), filed April 1997. This rejection is repeated for the reason of record as set forth in the last Office action mailed 6 February 2002. Applicant's arguments filed 6 June 2002 have been fully considered but they are not persuasive.

Applicant argues that Applicant's perfection of a claim to foreign priority to Japanese Application 8-338673 with the filing of a translation of said Japanese Application, filed 6 June 2002, has overcome the instant rejection. Applicant also argues that Osumi '292' is no longer available as prior art. This is not found persuasive because the issue of 35 U.S.C. 102(e) is the earlier U.S. filing date of Osumi *et al*. Applicant's perfection of a claim to foreign priority does not overcome this rejection. See, 35 U.S.C. § 102(e) which states that "A person shall be entitled to a patent unless the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent". In the instant case the invention of Osumi *et al* is presumed to precede

Applicant's invention because of the earlier U.S. filing date of Osumi *et al*. In addition, the '292' patent of Osumi *et al* has an earlier foreign priority date than that of the instant application, hence it is presumed that Osumi *et al* was the first to invent. If Applicant does not agree with this opinion, it is within Applicant's purview to initiate an interference with the issued '292' patent of Osumi *et al*. Although, in the instant case the invention disclosed by Osumi *et al* in the '292' patent is directed to a cucumber raffinose synthase gene, which Applicant does not disclose in the instant specification.

Double Patenting

12. Claims 1-4, 6-7, 9-18, 30-36, 40-41 and 43-44 remain provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 and 16-22 of copending Application No. 09/301,766. This rejection is repeated for the reason of record as set forth in the last Office action mailed 6 February 2002. Applicant's state that an appropriate terminal disclaimer will be filed one the co-pending application is allowed (see page 9, 1st paragraph of the Reply). However, a statement of intent does not obviate the rejection.

13. Claims 1-4, 7, 10, 11, 14-16, 30-36 and 40-41 remain provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5-7 and 14-17 of copending Application No. 09/612,095. This rejection is repeated for the reason of record as set forth in the last Office action mailed 6 February 2002. Applicant's state that an appropriate terminal disclaimer will be filed one the co-pending application is allowed (see page 9, 1st paragraph of the Reply). However, a statement of intent does not obviate the rejection.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. No claims are allowed.

16. Claims 6, 9, 12, 13, 17, 18, 43 and 44 appear to be free of the prior art, which neither discloses nor suggests the claimed invention.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Kruse, Ph.D. whose telephone number is (703) 306-4539. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Amy Nelson can be reached at (703) 306-3218. The fax telephone number for this Group is (703) 872-9306 Before Final or (703) 872-9307 After Final.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Kim Davis whose telephone number is (703) 305-3015.

Amy Nelson

AMY J. NELSON, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

David H. Kruse, Ph.D.
15 August 2002